

WHAT IS CLAIMED IS:

1. A sheet package producing system for producing a sheet package having a predetermined number of sheets, comprising:

a cutting/stacking device for forming said sheets by cutting continuous sheet at a regular length, and for stacking said sheets in said predetermined number;

a covered sheet stack producing device for covering said stacked sheets in a protective cover, to obtain a covered sheet stack;

a packaging device for packaging said covered sheet stack to obtain said sheet package;

wherein said cutting/stacking device, said covered sheet stack producing device and said packaging device are connected in series with one another.

2. A sheet package producing system as defined in claim 1, wherein said cutting/stacking device, said covered sheet stack producing device and said packaging device are balanced in line capacity balance relative to one another.

3. A sheet package producing system as defined in claim 1, wherein said protective cover includes transversely extending plural bending lines for defining first, second and third portions, said first portion being positioned on an end face of said stacked sheets, said second and third portions being positioned on upper and lower faces of said stacked sheets;

said covered sheet stack producing device includes:

a first handling module for placing either one of said second portion and said stacked sheets on an upper surface of a remaining one thereof;

a folding module for folding said protective cover

along said plural bending lines, and for squeezing said stacked sheets between said second and third portions, to obtain said covered sheet stack.

4. A sheet package producing system as defined in  
5 claim 3, wherein said cutting/stacking device includes:  
a supply module for feeding said continuous sheet;  
a cutter module for cutting said continuous sheet to obtain said sheets; and  
a stacker module for stacking said sheets in said  
10 predetermined number.

5. A sheet package producing system as defined in claim 4, wherein said first handling module places said second portion of said protective cover on said stacked sheets;  
15 further comprising a second handling module for turning over a sheet orientation of said stacked sheets to locate said protective cover under said stacked sheets, and then for setting said protective cover and said stacked sheets to said folding module;  
20 said folding module folds said protective cover by bending upward said third portion.

6. A sheet package producing system as defined in claim 5, wherein said cutting/stacking device further includes a synchronizing unit for synchronizing said supply  
25 module, said cutter module and said stacker module with one another.

7. A sheet package producing system as defined in claim 6, wherein said supply module, said cutter module and said stacker module include respectively drive power  
30 sources;

said synchronizing unit electrically synchronizes said

drive power sources.

8. A sheet package producing system as defined in claim 6, wherein said cutting/stacking device further includes:

5 a drive power source incorporated in one of said supply module, said cutter module and said stacker module; and

two transmission couplings for transmitting force of driving of said drive power source to remaining two of said  
10 supply module, said cutter module and said stacker module, to constitute said synchronizing unit.

9. A sheet package producing system as defined in claim 8, wherein said drive power source is incorporated in said cutter module.

15 10. A sheet package producing system as defined in claim 5, wherein said covered sheet stack producing device further includes a pre-bending module, actuated earlier than said folding module, for bending said protective cover temporarily by forcibly depressing said third portion;

20 said first handling module sets said protective cover on said pre-bending module, and then places said protective cover on said stacked sheets.

11. A sheet package producing system as defined in claim 10, wherein said second handling module includes:

25 a sheet chuck for capturing said stacked sheets;  
a moving robot arm for moving said sheet chuck; and  
a rotating mechanism, secured to said sheet chuck or said moving robot arm, for rotating said sheet chuck to turn over said sheet orientation.

30 12. A sheet package producing system as defined in claim 11, wherein said first handling module includes:

a cover suction pad for sucking said protective cover;  
a cover moving robot arm for moving said cover suction  
pad.

13. A sheet package producing system as defined in  
5 claim 5, wherein said packaging device includes:

a bag packaging machine for packaging said covered  
sheet stack in a packaging bag;

a box packaging machine for packaging said covered  
sheet stack in an outer box after packaging in said  
10 packaging bag, to obtain said sheet package.

14. A sheet package producing system as defined in  
claim 13, wherein said bag packaging machine includes:

a stack feeding module for feeding said covered sheet  
stack;

15 a module for wrapping said covered sheet stack with  
bag material; and

a module for folding a margin flap of said bag  
material wrapping said covered sheet stack, to form  
enclosure of said covered sheet stack in said packaging  
20 bag.

15. A sheet package producing system as defined in  
claim 14, wherein said box packaging machine includes:

a box forming module for forming said outer box by  
bending a plate material or sheet material; and

25 a box inserting module for inserting said covered  
sheet stack into said outer box after packaging in said  
packaging bag.

16. A sheet package producing system as defined in  
claim 5, wherein said cutting/stacking device further  
30 includes a decurler module for eliminating or reducing a  
curling tendency of said continuous sheet.

17. A sheet package producing system as defined in claim 1, wherein each of said cutting/stacking device, said covered sheet stack producing device and said packaging device includes:

5 plural modules; and

a pallet, disposed in each of said plural modules, having a size predetermined in consideration of a maximum size of said sheets, for supporting said continuous sheet, said sheets, said protective cover, said covered sheet  
10 stack or said sheet package.